ABSTRACT OF THE DISCLOSURE

Apparatus and method for testing one or more sterilization indicators (e.g., biological indicators or chemical indicators) or other articles by contacting them under controlled sterilization conditions with a flowing antimicrobial gas containing hydrogen peroxide vapor are disclosed. This invention also provides apparatus and method for testing sterilization processes that use a flowing antimicrobial gas containing hydrogen peroxide vapor under controlled sterilization conditions, or for testing materials for such processes under controlled sterilization conditions, or for testing both such processes and such materials under controlled sterilization conditions. There can be an essentially square-wave contact of the sterilization indicators or other articles with the antimicrobial gas (i.e., short rise time to reach full concentration of the antimicrobial gas in contact with the sterilization indicators or other articles and short fall time to remove all of the antimicrobial gas from contact with the sterilization indicators or other articles). A preferred way of generating a substantially constant flow of antimicrobial gas of substantially constant hydrogen peroxide concentration may be used to generate the antimicrobial gas. A preferred way of determining the hydrogen peroxide concentration in the antimicrobial gas may be used.

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